

NOTES ON A LITTLE KNOWN WORK BY PH. F. GMELIN  
PUBLISHED IN 1758 WHEREIN HE DESCRIBES  
SOME NEW SPECIES OF APHIS

BY F. C. HOTTES  
*Grand Junction, Colorado*

In *Fauna Suecica* published in 1746 Linnaeus named and described seventeen species belonging to the genus *Aphis*. Of the seventeen species treated in this work all but three were named as binomials. Because this edition of *Fauna Suecica* was published before 1758 the names and species described in this work would have no validity in our present system of nomenclature had not Linnaeus made some of them valid by reuse in the tenth edition of his *Systema Naturae*. The species thus treated were: *Aphis ribis*, *Aphis ulmi*, *Aphis pistinacae*, *Aphis sambuci*, *Aphis rumicis*, *Aphis rosae*, *Aphis tiliae*, *Aphis betulae*, and *Aphis pini*. In this edition of the *Systema Naturae* four species listed in *Fauna Suecica* were assigned new names. Thus *Aphis cucubali* became *Aphis lychnidis*, *Aphis serratulae* became *Aphis cirsii*, *Aphis artemisiae* became *Aphis absinthi*, and *Aphis centaureae* became *Aphis jaceae*. The trinomial which in this edition of *Fauna Suecica* was described on page 387 in the appendix and given the name *Aphis populi nigrae*, became *Aphis bursaria* in the tenth edition of the *Systema Naturae*, and for some reason *Aphis aceris* and *Aphis plantarum aquaticarum* were not treated but were left by Linnaeus to be described in the second edition of *Fauna Suecica* which was published in 1761. *Aphis aceris* being given the same name and *Aphis plantarum aquaticarum* becoming *Aphis nymphae*.

Joh. Aug. Ephraim Goeze in his *Entomologische Beyträge zu des Ritter Linné Zwölften Ausgabe des Natursystems*, Band II, published in 1778 frequently gives as reference, *Onomat. hist. nat. P. I.* in connection with the species belonging to the genus *Aphis* which he treats. This reference unique in aphid literature, so far as I am aware, aroused my interest.

After failing to locate this work in this country in 1932 I wrote to the late Dr. Walter Horn then Direktor of the Deutsches Entomologisches Institut der Kaiser Wilhelm Gesellschaft. I asked him to try and locate the work for me, and if successful to send me photostats of the pages on which the genus *Aphis* was treated.

Dr. Horn answered almost at once, saying that he had never seen a copy of the work but that he would try to locate one in Germany. He was able to give me the following citation: Ph. F. Gmelin, *Onomatologia medica completa seu onomatologia historiae naturalis oder vollstandiges Lexicon das alle Benennungen der Kunstwörter der Naturgeschichte nach ihrem ganzen Umfang erklärt*. Ulm, 1758-1777, 7 vols. (vols. 5-7 are by G. F. Christmann). This work is not listed by Hagen in his *Bibliotheca entomologica*. It is listed by Horn and Schenkling in their *Index Litteraturae Entomologicae* but they make no mention of Christmann. The British Museum catalogue of printed books lists Christmann as the author of vols. 5-7 of this work. Recently I have located a copy of this work by Gmelin in the Army Medical Library, Cleveland Branch (there is also a copy in the library of the British Museum) but I have seen only photostats of the title page of vol. 1 and of the columns devoted to *Aphis*. These were kindly sent me by Dr. Horn, a number of years ago.

For practical reasons the tenth edition of the *Systema Naturae* is assumed to have been published on January 1, 1758. Thus we must assume that Gmelin published his work after that of Linnaeus. There is ample evidence, however, that Gmelin was not familiar with the tenth edition and that Linnaeus was not familiar with the work of Gmelin. As proof one might cite the use of such terms as *artemisiae*, *serratulae*, and *centaurae* for species by Gmelin which had been used for species by Linnaeus in *Fauna Suecica* but which were not used by him for species in the tenth edition. One might also offer as proof that Gmelin was not familiar with the tenth edition, the species described as new in this work by Linnaeus of which Gmelin makes no mention. Of the works of Linnaeus which I have seen, no mention is made of Ph. F. Gmelin, or his species, the names of which were quite obviously taken from the edition of *Fauna Suecica* published in 1746.

Of the twenty names which Gmelin associates with the name *Aphis*, only *populi nigrae*, *ribis*, *sambuci*, and *tiliae* are associated with the name of Linnaeus. If Gmelin's borrowed names which he associated with quite adequate descriptions may be credited to him, and apparently they may according to the rules of Zoological Nomenclature the species treated by him may be considered as follows:

*Aphis aceris* Gmelin 1758, first valid use as a binomial. *Aphis aceris* L. 1761 is a homonym.

*Aphis aceris* as described by Linnaeus is generally considered to have been a composite species and there is no reason for thinking that the species described by Gmelin was otherwise.

*Periphyllus aceris* L. and *Periphyllus testudinatus* Thornton following Kessler Van Der Goot and Theobald would appear to be very difficult to separate except on the characters offered by their dimorphic forms. *P. testudinatus* having marked foliate lateral plates in the dimorph which are lacking in the dimorph of *P. aceris* but replaced in part by long dark hairs. Perhaps it will be less confusing to consider *Periphillus aceris* Gmelin to be the same species that in the restricted sense has been considered *Periphyllus aceris* (L.).

*Aphis artemesiae* Gmelin, 1758, first valid use as a binomial but a synonym of *A. absinthi* L.

*Aphis betulae* Gmelin 1758, *Aphis brassicae* Gmelin 1758, *Aphis cardui* Gmelin 1758 are homonyms of species described by Linnaeus in the tenth edition of the Systema Naturae. Both Linnaeus and Gmelin describe *A. betulae* as without wings and appendages. Linnaeus did not describe *A. brassicae* in the first edition of Fauna Suecica but in the 10th edition of Systema Naturae. The fact that Gmelin made use of the name *brassicae* can be taken as an indication that he was familiar with the 10th edition.

*Aphis centuareae* Gmelin 1758, first valid use as a binomial but a synonym of *Aphis jaceae* L.

*Aphis centureae* Koch is a homonym and will require a new name.

*Aphis cucubali* Gmelin 1758, first valid use as a binomial but a synonym of *Aphis lychnidis* L.

*Aphis cucubali* Passerini is a homonym and will require a new name.

*Aphis nymphae* Gmelin 1758, first valid use as a binomial. *Aphis nymphae* L. 1761 is a homonym as well as a synonym.

*Aphis pistacinaceae* Gmelin is a synonym of *A. pistacinaceae* L.

*Aphis pistaciae* Gmelin 1758, first valid use as a binomial. The species is a synonym of *Aphis bursarus* L. *Aphis pistaciae* L. 1767 is a homonym of the species described by Gmelin. Schumacher 1921 considers *Pemphigus utricularius* Passerini to be a synonym of *A. pistaciae* L. Schumacher places *Aphis pistaciae* L. in the genus *Baizongia* Rondani, following Rondani who had made it the type of his genus. Schumacher also makes the genus *Pemphigella* Tullgren a synonym of *Baizongia*. If Schumacher is correct

in his species synonymy *P. utricularius* Pass. appears to be the first available name to replace that proposed by Linnaeus. However, I choose to follow Mordvilko 1935 who considers *utricularius* Pass. to belong to the genus *Geoica*. This being the case it is most unlikely that the species described by Passerini is a synonym of the species described by Linnaeus. In this paper Mordvilko considers *Baizongia* and *Pemphigella* as synonymous but he gives preference to and uses *Pemphigella*. It is also in this paper that Mordvilko places *Tychea setariae* Pass. *Endeis carnosa* Buckton and *Geoica squamosa* Hart as synonyms of *Geoica utricularia* (Pass.). This synonymy had in part been indicated by Horvath (*Tychea setariae* Pass. and *Geoica squamosa* Hart) as early as 1896. If one follows Mordvilko there appears to be no species which has been declared a synonym of *A. pistaciae* L. Therefore, a new name is necessary. To honor the memory of one of my former Professors and the Nestor of American Aphidologists, I propose the name *Baizongia oestlundii* *nom. nov.* to replace that of *Baizongia pistaciae* (L.)

*Aphis ribis* credited to Linnaeus.

*Aphis rosae* Gmelin 1758 and *Aphis rumicis* Gmelin 1758 are homonyms as well as synonyms of species described by Linnaeus.

*Aphis sambuci* credited to Linnaeus.

*Aphis serratula* Gmelin 1758 first valid use of the term as a binomial but the species is a synonym of *Aphis cirsii* L. *Aphis serratula* Schrank is a homonym and will require a new name. *Aphis serratulae* Kaltenbach is also a homonym of the species described by Gmelin. Lambers has given the name *Dactynotus marcatus* to the species described by Kaltenbach. Dr. Lambers thought of Kaltenbach's species as a homonym of the species described by Schrank.

*Aphis tiliae* credited to Linnaeus.

*Aphis ulmi* Gmelin 1758 is a homonym as well as a synonym of the species described by Linnaeus.

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